

AMENDMENTS TO THE CLAIMS:

Amend the claims as follows:

1.(original) An organ culture device for culturing a viable organ, having:
a chamber for containing the viable organ, located along a liquid flow path for a
flow of culture medium through the chamber; and
a pump provided along the liquid flow path, for pumping the culture medium,
wherein the pump has a pump chamber with a net flow direction for culture
medium through the pump chamber, a pulsatile pumping action being obtainable by
repeated deformation of a deformable wall of the pump chamber, disposed laterally of
the net flow direction.

2.(original) A device according to claim 1 wherein the deformable wall is
resilient.

3.(currently amended) A device according to claim 1 ~~or claim 2~~ having gas
transfer means for gas transfer into or from the culture medium.

4.(original) A device according to claim 3 wherein said gas transfer means
operates by diffusion of gas through a gas-permeable wall.

5.(currently amended) A device according to ~~any one of the preceding~~
~~claims~~claim 1 wherein said repeated deformation of the deformable wall is obtainable by
pressurised gas outside said wall.

6.(original) A device according to claim 5 wherein said pressurised gas effects gas-transfer into said culture medium.

7.(original) A device according to claim 6 wherein said deformable wall of said pump is gas-permeable so that the gas transfer takes place through it.

8.(currently amended) A device according to ~~any one of the preceding claims~~claim 1 wherein the deformable wall extends substantially circumferentially around the pump chamber.

9.(original) A device according to claim 8 wherein the deformable wall is tubular.

10.(currently amended) A device according to ~~any one of the preceding claims~~claim 1 wherein the pump has an inlet and an outlet at opposing ends of the pump chamber and located on a longitudinal axis of the pump chamber, the deformable wall being disposed between the inlet and outlet and substantially parallel to the longitudinal axis.

11.(currently amended) A device according to ~~any one of the preceding claims~~claim 1 wherein the liquid flow path or a part of the liquid flow path extends from a reservoir for supplying culture medium to be pumped towards the chamber.

12.(currently amended) A device according to ~~any one of the preceding~~
~~claims~~claim 1 further having culture medium collection means, disposed downstream of
the chamber.

13.(original) A device according to claim 12 wherein the chamber and the
collection means are in communication via a flow restrictor.

14.(currently amended) A device according to ~~any one of the preceding~~
~~claims~~claim 1 wherein the liquid flow path, or a part of the liquid flow path, forms a liquid
flow circuit, at least some of the culture medium being allowed to recirculate in use.

15.(currently amended) A device according to ~~any one of the preceding~~
~~claims~~claim 1 including a sampling port located downstream of the chamber, for
sampling of the culture medium.

16.(currently amended) A device according to ~~any one of the preceding~~
~~claims~~claim 1 in use containing a viable organ in said chamber and circulating culture
medium in said liquid flow circuit.

17.(currently amended) A method of maintaining a viable organ for transport
and storage, using an organ culture device according to ~~any one of the preceding~~
~~claims~~claim 1.

18.(currently amended) An organ culture device according to ~~any one of the preceding claims~~claim 1 sterilized in readiness for housing a viable organ and contained within a sealed enclosure for maintaining its sterilized state.

19.(currently amended) An organ culture device according to claim 4, ~~5 or 6~~ further including a gas pressure control device for controlling gas flow to provide pulsed flow of pressurized gas to said pump, the organ culture device being sterilized in readiness for housing a viable organ and contained within a sealed enclosure maintaining its sterilized state.

20.(original) A pump for liquid having:
a pumping chamber for the liquid, there being a net flow direction in the pumping chamber for pumped liquid; and
a pumping member for acting on the liquid in the form of a deformable wall of the pump chamber, disposed laterally of the new flow direction,
wherein the deformable wall is acted on by pulses of pressurised gas to cause pumping.

21.(original) A pump according to claim 20 wherein the deformable wall is resilient.

22.(currently amended) A pump according to claim 20 ~~or claim 21~~ wherein the deformable wall extends substantially circumferentially around the pump chamber.

23.(currently amended) A pump according to ~~any one of claims 20 to 22~~claim 20 wherein the deformable wall is tubular.

24.(currently amended) A pump according to ~~any one of claims 20 to 23~~claim 20 having means for generating a pulsed flow of pressurised gas from a reservoir of pressurised gas.

25.(currently amended) A pump according to ~~any one of claims 20 to 24~~claim 20 wherein said deformable wall is gas-permeable, for gas transfer between the pumped liquid and the pressurised gas.

26.(original) A gas pressure control device for delivering pulsed pressurised gas, comprising a gas accumulator chamber having an inlet for connection to a source of pressurised gas and an outlet, the gas accumulator chamber being resiliently expansible by movement of a movable wall thereof, the device having a valve member movable between a closed position closing said outlet and an open position permitting outflow through said outlet, the device further having means actuated by the movement of the movable wall of the accumulator chamber to move the valve member from the closed position to the open position when a predetermined pressure is reached in the accumulator chamber and means for returning the valve member to the closed position

upon contraction of the accumulator chamber following release of a volume of gas therefrom.

27.(original) A device according to claim 26 wherein the accumulator chamber is a piston-and-cylinder assembly.

28.(currently amended) A device according to claim 26 ~~or 27~~ wherein the movable wall carries an actuating member which initiates movement of the valve member away from its closed position.

29.(currently amended) A device according to ~~any one of claims 26 to 28~~ claim 26 having biasing means, operating on the valve member during its movement from its closed position, whereby after removal of the pressure differential across the valve member upon its opening the valve member is moved by the biasing means to its open position.

30. (canceled)

31.(currently amended) An organ culture device ~~according to claim 1~~ having, as said pump thereof, a pump according to claim 20.

32.(currently amended) An organ culture device ~~according to claim 31~~ having
a gas pressure control device according to ~~any one of claims 26 to 29~~claim 26 for
delivering pulsed pressurized gas to said pump.

33.(currently amended) A pump ~~according to any one of claims 20 to 25~~
having a gas pressure control device according to ~~any one of claims 26 to 29~~ claim
26for delivering pulsed pressurized gas thereto.